

Substitute for Form 1449 A & B/PTO				<b>O I P E</b> <b>DEC 23 2003</b> <b>U.S. PATENT AND TRADEMARK OFFICE</b> <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(use as many sheets as necessary)</i>			
						<i>Complete if Known</i>	
						Application Number	10/660,730
						Confirmation Number	4923
						Filing Date	September 12, 2003
						First Named Inventor	Abraham GROSS et al.
						Art Unit	4722-1725
				Examiner Name	Unknown		
Sheet		1	of	6	Attorney Docket Number Q77482		

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	Document Number		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		Number	Kind Code <sup>2</sup> (if known)		
SMH		US 6,252,667		Jun 26, 2001	Hill et al.
SMH		US 6,295,171		Sep 25, 2001	Chao et al.
SMH		US 4,258,468		Mar 31, 1981	Balde
SMH		US 6,313,918		Nov 6, 2001	Hill et al.
SMH		US 5,933,216		Aug 3, 1999	Dunn
SMH		US 5,674,414		Oct 7, 1997	Schweizer
SMH		US 6,040,552		Mar 21, 2000	Jain et al.
SMH		US 6,037,564		Mar 14, 2000	Tatah
SMH		US 60/387,911		Jun, 2002	Gross et al.
SMH		US 4,447,291		May 8, 1984	Schulte

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SMH		WO	0064623	Nov, 2000	GSI Lumonics Inc.
SMH		EP	1224999	Apr, 2001	Sumitomo Heavy Industries
SMH		WO	03071344	Aug 28, 2003	Orbotech Ltd.

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS					
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SMH		Mignardi et al. "The Digital Micromirror Device – a Micro-Optical Electromechanical Device for Display Applications", MEMS and MOEMS Technology and Applications, SPIE Press, 2000			
SMH		Owen, Mark, New Technology for Drilling Through -and Blind-Vias in Copper Clad Reinforced Circuit Boards, IPC Proceedings, May 1995.			
SMH		Lee, Rex A. and Moreno, W.A., Excimer vs. ND:YAG Laser Creation of Silicon Vias for 3D Interconnects, IEEE, 1992, pp. 358-360.			

Examiner Signature	S. Heinrich	Date Considered	Aug. 25, 2005
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PTO/SB/08 A &amp; B (modified)

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SMYFF		US 5,789,121		Aug, 1998	Cywar et al.
		US 5,614,114		Mar, 1997	Owen
		US 5,841,099		Nov, 1998	Owen et al.
		US 5,593,606		Jan, 1997	Owen et al.
		US 3,594,081		Jul, 1971	Tschink
		US 5,676,866		Oct, 1997	In den Bäumen et al.
		US 5,690,845		Nov, 1997	Fuse
		US 5,948,291		Sep, 1999	Neylan et al.
		US 6,058,132		May, 2000	Iso et al.
		US 6,420,675		Jul, 2002	Lizotte et al.
		US 6,011,654		Jan, 2000	Schweizer et al.
		US 4,838,631		Jun, 1989	Chande et al.
		US 4,950,862		Aug, 1990	Kajikawa
		US 5,113,055		May, 1992	Kuriyama
		US 5,585,019		Dec, 1996	Gu et al.
SMYFF		US 6,310,701		Oct, 2001	Lizotte et al.

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SMH		US 6,515,257		Feb 4, 2003	Jain et al.
		US 5,404,247		Apr 4, 1995	Cobb et al.
		US 5,948,288		Sep 7, 1999	Treves et al.
		US 5,408,553		Apr 18, 1995	English Jr. et al.
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		US 5,055,653		Oct 8, 1991	Funami et al.
		US 5,302,798		Apr 12, 1994	Inagawa et al.
		US 5,973,290		Oct 26, 1999	Noddin
		US 6,184,490		Feb 6, 2001	Schweizer
		US 6,573,473		Jun 3, 2003	Hunter et al.
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		US 20030168434		Sep 11, 2003	Gross et al.
		US 6,172,331		Jan, 2001	Chen
		US 6,491,361		Dec, 2002	Spann
		US 6,566,627		May, 2003	Brandinger et al.
SMH		US 4,038,108		Jul, 1977	Engel et al.

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SMH		US 6,483,071	B1	11/19/2002	Hunter et al.
		US			

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SMH		"Dopant-Induced Excimer Laser Ablation of Poly(tetrafluoroethylene)," Applied Physics B:Photo-Physics and Laser Chemistry, Mar. 92, vol. b54, No. 3, C R Davis et al, pp. 227-230.			
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SMH		"Printed Circuit Operations--A View from Inside," Unisys.			
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SMH		"LaserPulse," Electro Scientific Industries, Inc., Fall 1993, pp. 1-7.			
SMH		Y. S. Liu, "Laser Metal Deposition for High-Density Interconnect," Optics & Photonics News, Jun. 1992, pp. 10-14.			
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SMH		Hans-Ulrich Krebs and Olaf Bremert "Pulsed laser deposition of thin metallic alloys", Applied Physics Letters Vol. 62(19) pp. 2341-2343. May 10, 1993			

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SMH		Brannon, J.H., "Excimer-Laser Ablation and Etching," Circuits & Devices magazine, Sep. 1990 pp. 19-24.			
SMH		Cole, H.S., Liu, Y.S., and Philipp, H.R., "Dependence of photoetching rates of polymers at 193 nm on optical absorption depth," Appl. Phys. Lett., vol. 48, No. 1, 6 Jan. 1986, pp. 76-77.			
SMH		Dyer, P.E., and Sidhu, J., "Spectroscopic and fast photographic studies of excimer laser polymer ablation," J. Appl. Phys. 64 (9), 1 Nov. 1988, pp. 4657-4663.			
SMH		4420 Laser Micromachining System -ESI Brochure (2 pages), Sep. 1993.			
SMH		Ewing, J.J., "Advanced solid-state lasers challenge conventional types," Laser Focus World, Nov. 1993, pp. 105-110			
SMH		Hobbs, Jerry R., "Electronics makers switch to precise micromachining tools," Laser Focus World, Mar. 1994, pp. 69-72.			
SMH		Lee, Rex A. and Moreno, W.A., Excimer vs. ND-YAG Laser Creation of Silicon Vias for 3D Interconnects, IEEE, 1992, pp. 358-360.			
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SMH		Owen, Mark, New Technology for Drilling Through -and Blind-Vias in Copper Clad Reinforced Circuit Boards, IPC Proceedings, May 1995.			
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SMH		ESI "Model 4570 Series Lasers Service Guide", Feb, 1994,			

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